



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,703	11/15/2001	Byung Keun Lim	HI-0053	7192
34610	7590	08/22/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			JAIN, RAJ K	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary	Application No. 09/987,703	Applicant(s) LIM, BYUNG KEUN	
	Examiner Raj K. Jain	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 7 and 12 are rejected under 35 U.S.C. 103(a) as being as being unpatentable over Bertrand et al (US006876640B1) in view of Feeney et al (US00578677).

Regarding claims 1, and 7, Bertrand discloses a method and system for multicasting/broadcasting IP data (see Fig. 1, a PDSN communicates with a mobile via the IP network and radio network, col 6 lines 23-43) the mobile communication system, comprising the steps of:

-a packet data serving node (see Fig. 1, PDSN 120) receiving multicast packet data (see Figs. 1 & 2, col 6 line 23-43; When the PDSN 120(1) searches for a PPP context for a particular mobile station, such as the mobile station 102(1), the PDSN 120(1) sends a query on the multicast address and port. PPP Registers that listen on the multicast address and port, such as the PPP register 126(1), respond to the PDSN 120(1) so that the PDSN 120(1) receives a response from each of the PPP registers that can be reached through the multicast address and port.);

-transforming the multicast packet data to a PPP frame format having an identification header (The multicast data is encapsulated into a standard PPP frame

Art Unit: 2616

format through a variety of protocols for example by layer two tunneling protocol see col 2 lines 30-35, the PPP context (session negotiation of PPP with mobile station and PDSN) contains number of different parameters such as user ID, protocol identifier, see col 3 lines 10-20);

-transmitting multicast message to base station controller/packet control function (See Figs 1 & 2, col 4 lines 50-66. The PDSNs 120(1), 120(2) and 120(3) are responsible for establishing, maintaining, and terminating PPP sessions with mobile stations such as the mobile stations 102(1), 102(2) and 102(3), thus when the mobile station 102(1), which is being served by the RN 108(1), desires to begin a PPP session, the mobile station 102(1) sends a connection message 202 to the serving RN 108(1). Responsive to receipt of the message 202, the RN 108(1) generates an R-P connection message 204 to the PDSN 120(1) (assuming that the PDSN 120(1) was selected by the RN 108(1)). Responsive to the R-P connection message 204, the PDSN 120(1) executes a PPP negotiation 206 through the RN 108(1) to the mobile station 102(1). The Packet Data Serving Node (PDSN) communicates with the BSC to add and remove IP multicast flows. It may use IP multicast protocols to manage bearers supporting IP multicast flows between itself and the nearest router connecting back to the BCMCS content server.);

-the BSC/PCF transmitting multicasting/broadcasting message to all or some of base stations under control of the BSC/PCF according to header information of the multicast message (The RNs 108(1) and 108(2) are responsible for relaying the PPP session data between the mobile stations 102(1), 102(2) and 102(3) and the PDSNs

Art Unit: 2616

120(1), 120(2) and 120(3), thus the radio networks are similar and/or same as base station controllers which control and manage one or more mobile stations within its serving area. The RNs are connected to an IP network 118, which provides an interface to the PDSN and other RNs as appropriate.)

-and transmitting the multicasting/broadcasting message to mobile station through broadcasting channel (The RNs 108(1) and 108(2) are responsible for relaying the PPP session data between the mobile stations 102(1), 102(2) and 102(3) and the PDSNs 120(1), 120(2) and 120(3). The radio networks are similar and/or same as base station controllers which control and manage one or more mobile stations within its serving area, thus the RNs transmit the messages to the mobile stations.).

Bertrand fails to disclose a header having information for identifying a multicast or broadcast message.

Feeney discloses a header having information for identifying a multicast or broadcast message (see Figs. 5 and 7, col 4 line 64-col 5 line 10 and lines 30-40, a message header 10b (Fig. 5) is used to specify broadcast or multicast message being sent to all or multiple destinations via control bits 32 or 36 as in Fig. 7). Identifying a message as multicast or broadcast provides network routing flexibility by routing messages only to those nodes which are to receive the message. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Feeney within Bertrand so as to improve network efficiency by identifying a message as multicast or broadcast prior to transmission and then transmitting only to those nodes which are to receive the message.

Regarding claims 2 and 12, Bertrand discloses transforming the received data to a multicast frame data (see col 6 lines 23-43, as the PPP 126 register is queried the data can be retrieved either manually or by multicast mechanism and therefore transforming the data received data to a multicast data and than adding an IP header for transmission through the IP network 118 forming the R-P interface.).

Regarding claim 3, Bertrand discloses adding multicasting/broadcasting identification header for multicasting/broadcasting to a terminal receiving services under IMT-2000, PCS, and cellular systems (see Figs. 1 & 2, col 1 lines 62-65, col 3 lines 30-43. An identification header information is added as part of the encapsulation of the PPP protocol see col 2 lines 29-40.);

Regarding claims 4 and 6, Bertrand discloses the mobile station receives the multicast PPP datagram and passes the data to the higher PPP link or IP layer (see col 2 lines 30-49, col 7 lines 19-30. The Point-to-Point Protocol (PPP) is a protocol provides Point-to-Point access and enables networking over serial lines. PPP is the protocol used by the cdma2000 wireless communication standard for communications between, for example, mobile stations and Packet Data Service Nodes (PDSNs). Layer Two Tunneling Protocol (L2TP) is a method for encapsulating standard PPP through a variety of media. L2TP also allows encapsulation of PPP using User Data Protocol (UDP) packets. L2TP supports non-IP protocols such as AppleTalk and IPX as well as LPSec Security Protocol. L2TP is implemented to provide secure, node-to-node communications in support of multiple, simultaneous tunnels in an IP-based network).

Claims 5, 8-11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertrand et al (US006876640B1) as applied to claims 1 & 7 above, in view of Utsumi et al (US006693896B1) and further in view of Feeney et al (US00578677).

Regarding claims 5, 8 and 14, discloses Bertrand discloses a method and system for multicasting/broadcasting IP data (see Fig. 1, a PDSN communicates with a mobile via the IP network and radio network, col 6 lines 23-43) the mobile communication system, comprising the steps of:

- a packet data serving node (see Fig. 1, PDSN 120) receiving multicast packet data (see Figs. 1 & 2, col 6 line 23-43; When the PDSN 120(1) searches for a PPP context for a particular mobile station, such as the mobile station 102(1), the PDSN 120(1) sends a query on the multicast address and port. PPP Registers that listen on the multicast address and port, such as the PPP register 126(1), respond to the PDSN 120(1) so that the PDSN 120(1) receives a response from each of the PPP registers that can be reached through the multicast address and port.);

- transforming the multicast packet data to a PPP frame format having an identification header (The multicast data is encapsulated into a standard PPP frame format through a variety of protocols for example by layer two tunneling protocol see col 2 lines 30-35, the PPP context (session negotiation of PPP with mobile station and

PDSN) contains number of different parameters such as user ID, protocol identifier, see col 3 lines 10-20);

-transmitting multicast message to base station controller/packet control function (See Figs 1 & 2, col 4 lines 50-66. The PDSNs 120(1), 120(2) and 120(3) are responsible for establishing, maintaining, and terminating PPP sessions with mobile stations such as the mobile stations 102(1), 102(2) and 102(3), thus when the mobile station 102(1), which is being served by the RN 108(1), desires to begin a PPP session, the mobile station 102(1) sends a connection message 202 to the serving RN 108(1). Responsive to receipt of the message 202, the RN 108(1) generates an R-P connection message 204 to the PDSN 120(1) (assuming that the PDSN 120(1) was selected by the RN 108(1)). Responsive to the R-P connection message 204, the PDSN 120(1) executes a PPP negotiation 206 through the RN 108(1) to the mobile station 102(1). The Packet Data Serving Node (PDSN) communicates with the BSC to add and remove IP multicast flows. It may use IP multicast protocols to manage bearers supporting IP multicast flows between itself and the nearest router connecting back to the BCMCS content server.);

-the BSC/PCF transmitting multicasting/broadcasting message to all or some of base stations under control of the BSC/PCF according to header information of the multicast message (The RNs 108(1) and 108(2) are responsible for relaying the PPP session data between the mobile stations 102(1), 102(2) and 102(3) and the PDSNs 120(1), 120(2) and 120(3), thus the radio networks are similar and/or same as base station controllers which control and manage one or more mobile stations within its

serving area. The RNs are connected to an IP network 118, which provides an interface to the PDSN and other RNs as appropriate.)

-and transmitting the multicasting/broadcasting message to mobile station through broadcasting channel (The RNs 108(1) and 108(2) are responsible for relaying the PPP session data between the mobile stations 102(1), 102(2) and 102(3) and the PDSNs 120(1), 120(2) and 120(3). The radio networks are similar and/or same as base station controllers which control and manage one or more mobile stations within its serving area, thus the RNs transmit the messages to the mobile stations.).

Bertrand fails to disclose the multicast packet data comprising a header information including QoS, multicast/broadcast type, multicast/broadcast group, and length information including body data of the PPP frame format and message body.

Utsumi discloses an information receiving method and apparatus (see Fig.1), which uses an AMInet set-up-protocol or ASP. The format of the ASP header is shown in Fig. 11 which includes multicast type, family or group, length, protocol information, QoS parameters can also be mapped as shown in Fig. 5 which are used to interpret the VPI/VCI values for a link, see col 17 lines 25-37, col 20 lines 5-29. The concept of AMInet or high speed protocol is used to quickly and efficiently reserve and release resources without thought of use, thus the ASP header is modified and reserved based on individual needs of the user. Thus incorporating the ASP protocol header within Bertrand would allow expandability of modifying the header as desired based on individual or group of users as appropriate. Therefore it would have been obvious at the time the invention was made to incorporate the teachings of Utsumi within Bertrand so

as to allow expandability of modifying the header as desired based on individual or group of users as appropriate.

Bertrand and Utsumi fail to disclose a header having information for identifying a multicast or broadcast message.

Feeney discloses a header having information for identifying a multicast or broadcast message (see Figs. 5 and 7, col 4 line 64-col 5 line 10 and lines 30-40, a message header 10b (Fig. 5) is used to specify broadcast or multicast message being sent to all or multiple destinations via control bits 32 or 36 as in Fig. 7). Identifying a message as multicast or broadcast provides network routing flexibility by routing messages only to those nodes which are to receive the message. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Feeney within Bertrand and Utsumi so as to improve network efficiency by identifying a message as multicast or broadcast prior to transmission and then transmitting only to those nodes which are to receive the message.

Regarding claim 13, Utsumi discloses an information receiving method and apparatus (see Fig.1), which uses an AMInet set-up-protocol or ASP. The format of the ASP header is shown in Fig. 11 which includes multicast type, family or group, length, protocol information, QoS parameters can also be mapped as shown in Fig. 5 which are used to interpret the VPI/VCI values for a link, see col 17 lines 25-37, col 20 lines 5-29. The concept of AMInet or high speed protocol is used to quickly and efficiently reserve and release resources without thought of use, thus the ASP header is modified and

reserved based on individual needs of the user. Thus incorporating the ASP protocol header within Bertrand would allow expandability of modifying the header as desired based on individual or group of users as appropriate. Therefore it would have been obvious at the time the invention was made to incorporate the teachings of Utsumi within Bertrand so as to allow expandability of modifying the header as desired based on individual or group of users as appropriate.

Regarding claim 9, Bertrand discloses (Fig. 1) PDSN 120 transmitting multicast data to the RNs 108 which are same as BSC see Figs. 1 & 2, col 6 line 23-43; When the PDSN 120(1) searches for a PPP context for a particular mobile station, such as the mobile station 102(1), the PDSN 120(1) sends a query on the multicast address and port. PPP Registers that listen on the multicast address and port, such as the PPP register 126(1), respond to the PDSN 120(1) so that the PDSN 120(1) receives a response from each of the PPP registers that can be reached through the multicast address and port.;

Regarding claim 10, Bertrand discloses adding multicasting/broadcasting identification header for multicasting/broadcasting to a terminal receiving services under IMT-2000, PCS, and cellular systems (see Figs. 1 & 2, col 1 lines 62-65, col 3 lines 30-43. An identification header information is added as part of the encapsulation of the PPP protocol see col 2 lines 29-40.);

Regarding claim 11, Bertrand discloses transforming the received data to a multicast frame data (see col 6 lines 23-43, as the PPP 126 register is queried the data can be retrieved either manually or by multicast mechanism and therefore transforming

the data received data to a multicast data and than adding an IP header for transmission through the IP network 118 forming the R-P interface.).

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

RJ

August 10, 2006



WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER